Twin Diode—High-Mu Triode

9-PIN MINIATURE TYPE

With Heater Having Controlled Warm-Up Time

GENERAL DATA

Electrical:

Heater Characteristics and Ratings *(Design-Maximum Values)*:

Heater-section arrangement	*Parallel*	*Series*	*Series*	
Voltage (AC or DC)	3.15[a]	6.3[b]	6.3 ± 0.6	volts
Current	0.600 ± 0.040	0.300 ± 0.020	0.300[c]	amp
Warm-up time (Average)	11	11	-	sec

Peak heater-cathode voltage (Each unit):

Heater negative with respect to cathode	200 max.	volts
Heater positive with respect to cathode	200[d] max.	volts

Direct Interelectrode Capacitances (Approx):[e]

Triode Unit:

Grid to plate	1.8	pf
Grid to cathode and heater	1.5	pf
Plate to cathode and heater	0.5	pf

Diode Units:

Diode-No.1 plate to cathode of diodes No.1 and No.2 & internal shield, and heater	3.6	pf
Diode-No.2 plate to cathode of diodes No.1 and No.2 & internal shield, and heater	3.6	pf
Triode grid to either diode plate	0.006	pf

Characteristics, Class A_1 Amplifier (Triode Unit):

Plate Voltage	100	250	volts
Grid Voltage	-1	-3	volts
Amplification Factor	70	70	
Plate Resistance (Approx.)	54000	58000	ohms
Transconductance	1300	1200	μmhos
Plate Current	0.8	1	ma

Mechanical:

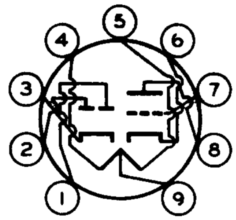
Operating Position	Any
Type of Cathodes	Coated Unipotential
Maximum Overall Length	2-3/16"
Maximum Seated Length	1-15/16"
Length, Base Seat to Bulb Top (Excluding tip)	1-9/16" ± 3/32"
Diameter	0.750" to 0.875"
Dimensional Outline	See *General Section*
Bulb	T6-1/2
Base	Small-Button Noval 9-Pin (JEDEC No.E9-1)

←Indicates a change.

6CN7

Basing Designation for BOTTOM VIEW. 9EN

Pin 1 - Diode-No.2 Plate
Pin 2 - Diode-No.1 Plate
Pin 3 - Cathode of Diodes No.1 & No.2, Internal Shield



Pin 4 - Heater
Pin 5 - Heater
Pin 6 - Triode Cathode
Pin 7 - Triode Grid
Pin 8 - Triode Plate
Pin 9 - Heater Tap

TRIODE UNIT — AMPLIFIER — Class A_1

Maximum Ratings, ***Design-Maximum Values:***

PLATE VOLTAGE	330	max.	volts
GRID VOLTAGE:			
Positive-bias value	0	max.	volts
PLATE DISSIPATION	1.1	max.	watts

Typical Operation as Resistance-Coupled Amplifier:

See *RESISTANCE-COUPLED AMPLIFIER CHART No.7* at front of this section

DIODE UNITS — Two

Values are for Each Unit

Maximum Ratings, ***Design-Maximum Values:***

PLATE CURRENT	5.5	max.	ma

Characteristics, Instantaneous Value:

Plate Current for plate volts = 5	20	ma

[a] At heater amperes = 0.600.
[b] At heater amperes = 0.300.
[c] At heater volts = 6.3
[d] The dc component must not exceed 100 volts.
[e] Without external shield.

CURVES
For Triode shown under Type 6T8A also apply to the 6CN7